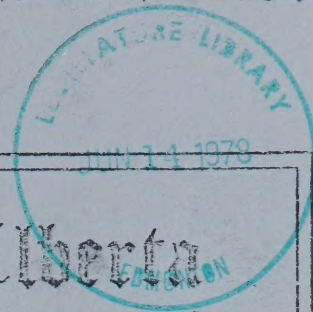




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The Province of Alberta

IN THE MATTER OF THE PUBLIC INQUIRIES ACT

AND IN THE MATTER OF O/C 290/73, AN INQUIRY
INTO THE NEW TOWN OF GRANDE CACHE

N. R. CRUMP, Esq.,	Chief Commissioner
T. H. PATCHING, Esq.,	Commissioner
DAVID GRAHAM, Esq.,	Commissioner

W. A. Stevenson, Esq.,	Commission Counsel
D. O. Sabey, Esq., Q.C., and J. G. Martland, Esq.,	For McIntyre Porcupine Mines Ltd.

DATE: October 5, 1973
HELD AT: Edmonton, Alberta.

VOLUME XIX
(Pages 1771 - 1815)

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I N D E X

VOLUME XIX

October 5, 1973

WITNESSES:

K. WARDELL (Recalled)

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K. Wardell - Sabey Ex.

PROCEEDINGS before the Board of
Commissioners, at the Law Courts,
City of Edmonton, Province of
Alberta, commencing at 9:30 a.m.,
Friday, October 5th, A.D. 1973.

MR. CRUMP: Mr. Wardell, of course you are still
under oath?

MR. WARDELL: Yes, sir.

Q MR. SABEY: Mr. Wardell, your evidence was that
at the end of 1972 the need of the company was to increase
output and reduce costs?

A Yes.

Q And your thesis was to increase productivity, I believe, sir,
your evidence yesterday?

A Yes.

Q And that is related to the need or the desire to continue with
the long term 15 year contract?

A No, I don't -- no I have not made that specific connection.

Q You did not, sir, but I ask you if that was a factor in your
consideration?

A No.

Q I see, well, sir, if the 15 year contract were terminated and
the company engaged in this period of realignment that Mr.
Fulton discussed to get the whole thing under control why then
was there a need to increase productivity?

A Oh, to decrease cost. It seemed to me that the position of the
company was that in fact it wasn't making a profit, and the
contract was only one aspect, if I may put it like that of --

Q Well, it certainly --

A . The people, surely, the people in the parties who were involved.

Q Yes, sir, but, sir, perhaps we are getting hung up on semantics again today and I don't want to do that --

A Not at all.

Q Let's avoid the word productivity --

A Yes.

Q I take it that you did not make the suggestion that it was necessary for them to continue to produce as much coal as they could at a maximum production rate?

A Yes, I think I do suggest that, no question about that.

Q That it was not necessary to do that?

A No, it was necessary to produce at that time, to produce as much coal as they could.

Q Well, sir, why if they could terminate the Japanese contract, if they could retrench so to speak was it necessary to continue to produce as much coal as they possibly could?

A I think there were a number of reasons for this. I think the first and essential one is that there were fixed annual costs. So if one were looking for a general reduction in unit costs then one wanted to maximize output.

Q Yes, sir.

A That was one reason. Second reason was that the coal had to travel over the Alberta Resources Railroad and over the Canadian National Railroad, and presumably in order to, for them to have benefits from the situation they needed the maximum quantity of coal.

1-HGans-3

K. Wardell - Sabey Ex.

Q You are now talking about the railroad?

A Yes, yes, I am talking about the particular interest that were affected by the question of the level of output.

Q The several interests?

A Yes.

Q All right.

A And then there was the question of the miners and the townsite. If there was a retrenchment so far as output was concerned, this meant laying off miners and that had its own effect on the town itself.

Q So then your consideration in, your thesis in saying the productivity should continue at a higher rate was not limited or restricted to a consideration from a corporate standpoint, but from looking at it the interests of these various and several groups?

A That's correct, of course.

Q Isn't it conceivable that very sort of pressure or consideration of interests of other persons may have led them into that predicament in the first place, too much too soon I think it had been categorized?

A I think that is possible.

Q Yes. All right, sir, now if we can look at it purely and selfishly from just the corporate interest.

A Yes.

Q The necessity from just the corporate interest to produce and continue at a high rate of production was not as great as it might have been had you included these other considerations,

1-HGans-4
K. Wardell - Sabey Ex.

Q (Continued) with the railways and the miners and the obligations to the Province?

A Obviously they added weight to the situation and obviously they, it seems to me, if I may put it this way, were material matters.

Q There was a sense of obligation that should be considered?

A Yes.

Q But, sir, your report then deals only with the underground mines?

A It does indeed.

Q Your report does not consider the company's decision to re-align production to cut these high costs in underground and hopefully or presumably go to a lesser cost in the strip mining?

A Well, I mean it considered that in the general way.

Q Yes.

A I mean one couldn't disassociate what was being done in relation to the underground mines from what was being proposed in relation to No. 8 mine.

Q But our consideration to the closing of the No. 5 mine are in the context in the underground mining and not this general realignment and reducing costs by going to the strip mining?

A They have to be in that broad context I think.

Q And were they in your report?

A Yes, yes.

Q All right, sir. Now then in your report you say in dealing with this matter of the closure of the No. 5 mine, you say

1-HGans-5

K. Wardell - Sabey Ex.

Q (Continued) that longwall was aborted in No. 5 mine?

A Yes.

Q And you say that the principal difficulty in the longwall lay in the absence of satisfactory ground control?

A Yes.

Q You say that the subsequent room and pillar extraction was not uniformly successful, and that the roof and particularly the floor conditions continued to be poor and to hamper operational efficiency particularly at the No. 5 mine?

A That's correct.

Q You say that involved a great deal of brushing and retimbering in No. 5?

A Yes.

Q You say that the structure in No. 5 does not lend itself generally, either to longwall or to hydraulic mining?

A That's correct.

Q And you say that there could be little advantage in continuing any further with the entries, I think that is one and two at No. 5, due to the increased cover and the increased gradient?

A That is true.

Q You say that the coal to the east of the main entries was too deep for successful room and pillar extractions?

A I am just trying to get myself orientated. May I just look at the plan?

Q Surely.

A To make sure I made the right comment.

1-LP-1

K. Wardell - Sabey Ex.

A (continued) May I know the reference please, Mr. Sabey?

Q Page 84, paragraph 2.7, the sentence, as I see it is:

"The coal to the east of the main entries is too deep for successful room and pillar extraction, longwall mining has proved abortive and the structure does not lend itself generally either to longwalling or to hydraulic mining."?

A Yes, perhaps I may just point out the area.

Q Please do?

A That you are speaking of.

Q Mr. Wardell, perhaps you might face the Commission a little more.

MR. CRUMP: We would be able to hear better if you would.

A The north point is shown on the plan so the right-hand side of the plan is, generally speaking, to the east. So, generally speaking I was describing that area of coal which lay really south and eastwards of the first, and second east developments and the second north development.

Q I see.

A That was this area.

Q I see, all right, fine, thank you. Continuing then, Mr. Wardell, you say that it must have been evident that little advantage was to be gained from the development of No. 5 mine?

A Yes, from further development to the south at least, yes.

Q Thank you. You say that in 1972 there was a heavy fall off in production at No. 5 even though the number of continuous miners was up from 4 to 5?

1-LP-2

K. Wardell - Sabey Ex.

A Heavy fall off, yes, in production and productivity.

Q In No. 5?

A In No. 5.

Q Yes. You note the production for both mines had fallen, that is both 2 and 5?

A Yes.

Q Had fallen from an average of 18 raw tons per man shift for underground workers in 1971 to 14.5 tons for 1972 and you presume a higher proportion of this short fall occurred at the No. 5 mine?

A That is correct.

Q You point out the costs for 1972 were \$1.11 higher than for 1971 in the No. 5 mine. Now, those are my mathematics, I have taken the figures you have used.

A I am sure you are right, Mr. Sabey, but perhaps I may just have the opportunity to check.

Q Would you please, in the little table at page 90 you show the 1972 figures at \$5.61 in No. 2 and \$6.71 in No. 5, so there is a difference of \$1.11?

A There is a difference of \$1.11.

Q And, sir, the increase, obviously from your table, in the costs in No. 5 mine was up proportionately higher than it was in the No. 2 mine, from \$5.95 to \$6.72 in No. 5 and from \$5.64 to \$5.61 in No. 2?

A That is the proportion, that is quite true.

Q And also as an absolute dollar figure?

A Oh, absolutely as an absolute dollar figure.

1-LP-3

K. Wardell - Sabey Ex.

Q You say that through 1972 the performance of the No. 5 mine was low relative to that at No. 2?

A Taking the year as a whole, yes, sir.

Q And you discussed that table with Mr. Stevenson yesterday?

A I did.

Q And you say that by the end of 1972 it was clear that some action was needed to reverse the continually deteriorating condition and that there was a need to act decisively and reduce costs?

A That is quite right.

Q Now, sir, the last comment is curiously similar to the words used by Mr. Fulton in his evidence and I don't mean to imply anything by that statement, sir, I am sure it is coincidence but it is clear from Mr. Fulton's evidence that the company's action was to reverse this continually deteriorating situation?

A I don't have any doubt that that was the wish and the intention.

Q Well, sir, with all of these 12 factors we have gone through, would you agree with me it is not too much to assume that management considered there was no foreseeable improvement in No. 5 mine? I realize I am asking you to engage in conjecture as to what management might have considered but, sir, that is in part what you have done in your whole report, so I don't hesitate to use this?

A Yes, I think there were two factors that arose here.

Q Sir, as to whether or not management might have considered this not to be foreseeably economic?

A Yes. I think there were two factors in the historical or, one

1-LP-4

K. Wardell - Sabey Ex.

A (continued) factor in the historical situation that was relevant and I frankly admit it caused me a great deal of doubt and uncertainty and that was at some time, and I don't know the precise date, but the latter part of November, there was a predication in the 1973 budget for No. 2 and No. 5 mines that during 1973 the costs of production at No. 5 mine would be less than the costs of production at No. 2 mine.

Q That was another prediction or projection?

A Of course.

Q Fine, what was the other factor?

A I am sorry, would you be kind enough to repeat your question because it just disappeared out of my mind for a moment.

Q Yes, sir, my question was this, with all of these factors, would you agree it is not too much to assume that the management considered there was no foreseeable improvement at No. 5 mine?

A Well, again, with great respect, Mr. Sabey, I have seen no documentation which says quite specifically that looking at No. 5 mine as a mine, not merely looking at its past performance but looking at it as a mine, that some operational personnel said there is no possibility for 1973 or even beyond that that the cost of production of this mine can be reduced. I haven't seen any evidence to that effect. Now, it may have been said, but I haven't seen any evidence of it.

Q Thank you. It is a question of whether management examined the situation in sufficient depth and whether they considered the alternatives; before we get to the alternatives which you did suggest, how long did it take you to prepare your indepth report

1-LP-5

K. Wardell - Sabey Ex.

Q (continued) with those alternatives?

A Four weeks.

Q And you started then, I got your report earlier this week, you started the 1st of September?

A No, it took place in sections. I visited the mines first for a brief visit one day in May. I came back to Canada the latter part of July which also included a visit of two days to the mines, and I spent three weeks here during that time.

Q Gathering information?

A Really going through the documentation and then I was here a week before this inquiry opened. Most of my review was done during the three-week period in the latter July and early part of August and most of the report was written during that time so only the final part was concluded during the week before the inquiry opened.

Q That is the final draft you mentioned?

A Yes.

Q Sir, you have been talking about the alternatives, you first suggest, and there is no significance in the order of this, sir, you first suggested a 7-day week, that the number of operating days be increased from 5 to 7, that was one possible alternative?

A This was the proposition of the company.

Q Sir, and it was one of the alternatives that you suggested as well in your report and indeed, as you point out, the company did make that suggestion?

A Again, I wouldn't want to indulge in semantics, Mr. Sabey, but I didn't make the suggestion. The suggestion was made and I

1-LP-6

K. Wardell - Sabey Ex.

A (continued) considered that this was one of the alternatives that was available, which the company had suggested.

Q Well, sir, -- all right. You certainly do discuss that possibility as one of the alternatives?

A That is correct, yes.

Q But in point of fact, I think you and I agree, that is one alternative put by management and was refused by the Union and/or the Labour?

A Yes.

Q All right, you then discussed as a further alternative, increasing the operating shifts to 3 per day?

A Yes.

Q And you note that might adversely affect the maintenance of equipment?

A Yes.

Q Might it also adversely affect the maintenance of the mine itself in view of the adverse ground conditions?

A Yes, I think the primary difficulty, which you haven't mentioned, about operating on a three-shift basis, you have half as many men again to operate on a three-shift-a-day basis, and they weren't available. So it was a matter, a question which could be considered but which could be put aside but it was really hardly capable of implementation.

Q As usual, Mr. Wardell, you are anticipating and that was my next question.

A Surely.

Q You also discussed the possibility of improving producibility

1-LP-7

K. Wardell - Sabey Ex.

Q (continued) by greater effort with the cooperation of Union and Labour?

A That is right.

Q And some changes in procedures and conditions underground?

A Yes.

Q Without dealing at any great lengths on the cooperation of the labour, which you deal with in your brief, when you talk about a change in procedures and conditions you suggested they should see if there is some specific mining reason for the low productivity and correct that?

A Yes.

Q Did you have any specific mining reasons in mind as an hypothesis?

A Yes. The thing that stood out, if one looked at the mine plans and if one read the reports, it was quite evident that a lot of the equipment was engaged on development.

Q Yes?

A Certainly at No. 2 and also at No. 5 mines and that generally speaking development was lower productivity operation than depillaring. So, in looking at the operations one can say, how can I change the balance? That is one possibility. The other possibility is to say, if I am going to depillar, how do I depillar in such a way as to maximize my productivity in that operation?

Q Yes?

A And I had some ideas about how this may have been achieved.

Q And a part of this development you referred to included the

1-LP-8

K. Wardell - Sabey Ex.

Q (continued) brushing that was going on?

A No, that wasn't --

Q Part of the brushing would have to be part of the development, not all of the brushing?

A That wouldn't be my understanding, Mr. Sabey, that brushing was a part of development. Brushing was carried out in order to achieve or maintain the roadways behind the development sections. The brushing itself was really no strict part of development.

Q Not strictly, sir, but certainly to the extent that any of the faces that had previously been were not then being worked, brushing was necessary to keep them open for future development and to that extent it would be a part of development?

A I don't think there is great difference between us on this. I wonder if I may just put it in this way?

Q Quite?

A That if when you were doing development the roadways behind you were closing up, as it were, then you had to brush them. In other words, you couldn't continue development unless you were properly maintaining the roadways behind you and that may have needed some brushing.

Q Quite, thank you. You suggest also, or discuss the possibility of cutting back on technical and administrative staff, that was in fact done, was it not, to the extent of about 140 personnel?

A I don't think 140 technical and administrative -- I don't have figures and I do apologize.

1-LP-9

K. Wardell - Sabey Ex.

Q I think there is evidence before the Commission --

A 140 underground workers or thereabouts but how many --

Q You are quite right, it was 60 technical and staff, I apologize for that.

A M-hm.

Q And that was done?

A To the best of my knowledge, yes.

1-HG-1

K. Wardell - Sabey Ex.

Q Now, you suggest, as you have this morning, depillaring in both Numbers 2 and 5. Now the company is doing just that in No. 2?

A That's right.

Q And as I understand the evidence, Mr. Wardell, by depillaring out of No. 2 there will be no loss of the reserves beyond the present workings because they can then come in from the other side?

A That's correct.

Q However, in depillaring No. 5, there would have been a loss of those reserves from that excess?

A If you consider that they were mineable anyway at the very considerable depths at which they lay.

Q Accepting that, sir.

A Surely.

Q But, of course, you say that they can't go back anyway under today's conditions?

A I think it's very hard to make a totally hard and fast judgment. I think it's very, very unlikely.

Q Under today's conditions?

A Today's conditions of what?

Q Economics, equipment, techniques.

A No, I don't really think it's a question of today's economics. I think it's a question that you cannot, generally speaking, put a mine on a care and maintenance basis. Once you close a mine, you are virtually shut off within those entries and

K. Wardell - Sabey Ex.

A (Continued) entrances, you have virtually shut yourself off from any further development in that area.

Q Well, do I understand, sir, to put it in its worst form, regardless of economics, once a mine has been closed, you can't go back in for technical reasons, you can't go back in, is that what you're saying?

A "Can't" is again an extremely difficult word, but for technical reasons you may well not be able to.

Q But if the economics are there you might be able to?

A Again, I'm so sorry, it's not simply a question of economics. If you have left in the old workings some area of coal in which you can develop new roadways, then you leave yourself with a possibility of doing this. But, if the area you're working is so extensive and has been cut up to the extent that you cannot develop and support entirely new roadways, then the prospect of going back and trying to reopen old roadways is technically and may technically prove to be an insuperable one. I have done it often enough and I'm still trying to do it often enough.

Q I'm sure you have, sir, but you do put the qualification in if you have mined out sufficiently --

A Yes.

Q -- you can't go back in. But if the roadways are there you can, now, as I understand your evidence now?

A At this moment in time.

Q Yes. Now, did you look at the roadways in No. 5 mine? Do you

1-HG-3

K. Wardell - Sabey Ex.

Q (Continued) know whether they were, of which of those two categories they were within?

A No, the mine was closed in May.

Q Management knew the condition of those roadways?

A At the time of closure, yes.

Q And they have indicated that that was one of the considerations that they felt that they might be able to go back in in the future?

A I have nothing to say.

Q Thank you. You do refer to, sir, the adverse effect on morale of the closure of No. 5 mine and I don't think anybody can question that. You had also referred to the adverse effect of the labour problem in 1972 as, perhaps, one of the factors in the decrease of production in No. 5 mine at that time?

A It seemed to me a possibility.

Q Yes sir, but, sir, equally that morale problem must have affected production in No. 2 mine. In other words, morale is an entire project problem. It isn't just one mine as against another?

A No, that's quite right.

Q And in point of fact, I think if you look at the tables in your report, the production in the No. 2 mine also declined rather dramatically from September to October of 1972, do you recall that?

A From September to October of 1972?

1-HG-4

K. Wardell - Sabey Ex.

Q That's in your chart at page 104, the first column, in September it was 88,000 and in October 48,000 in No. 2 mine, and in No. 5 it was 89 down to 29.

A With much respect this is a misreading of the figures.

Q I see.

A The figures you read are correct, but the reflection of morale, the reflection of morale on productivity must be read into the terms per machine shift and not into the terms of bulk output.

Q So while there was some reduction, it was not nearly so dramatic?

A No, the results, sir, at No. 2 mine in terms of productivity per machine shift in October, November and September were approximately the average for the year as a whole.

Q Yes sir. You also refer to one of the effects of this closure as a loss of these trained miners?

A Yes.

Q Now, sir, that assumes that everyone is going to stay and does have a tendency to disregard the high turnover rate that they were experiencing, at any rate?

A It did certainly not occur to me that, I knew perfectly well that there was a quite high turnover rate, but it also seemed to me that there was certainly going to be a proportion of trade miners.

Q Some of them?

A Yes.

1-HG-5

K. Wardell - Sabey Ex.

Q Sir, are you aware there has been other evidence that the normal turnover would have reduced the workers to the same number within two or three months and, in point of fact, the last man left the No. 5 mine something beyond three months after the announcement of the mine closure?

A I'm really not clear on this point at all. I have no information on that.

Q All right, that's fine. There is other evidence on that. Sir, turn to the future -- oh, before we turn to the future, you went through an exercise with Mr. Stevenson yesterday that intrigued me. You referred to two company reports dated January, 1973 and February, 1973 and noted that somewhat "strangely", I think is the word you used in the brief anyway, "The latter document upgraded the planned or projected output per manshift in No. 5 mine," and I agree with you that that does indeed appear strange, but what intrigues me is that you then take that criteria, that planned, that upgraded projection, and put it by way of comparison against the actual production experienced in No. 2 mine and clearly say you're doing it.

A Yes.

Q But, sir, I just want to be clear, we are really comparing apples and oranges when we compare an adjusted projection in one mine with the actual experience in another.

A You have confused me totally, Mr. Sabey.

Q All right.

1-HG-6

K. Wardell - Sabey Ex.

A Can we go back to the figures?

Q I don't know that the figures, themselves, are the thing -- let me find the paragraph, sir. You didn't deal with the paragraph, as such, in your evidence yesterday. You simply discussed it, and I don't have that figure.

MR. STEVENSON: Do you have a reference in the transcript?

MR. SABEY: No, I don't. As I say I don't have that page with me.

Q MR. SABEY: Oh, here we are, sir, page 92. Actually, the paragraph, itself, begins at 91, you make reference to, at the bottom of page 91, you make reference to the planned output per manshift indicated in the document entitled "Coal Costs if No. 5 Mine is Closed" dated January 17th, '73.

A Yes.

Q And then you observe that somewhat strangely, in a document dated February 7th, '73, only twenty days later, that figure was upgraded, and you then say, "What is evident at this time is that productivity judged by this criteria is lower for No. 5 during 1973 --"

MR. STEVENSON: Lower for No. 2.

Q MR. SABEY: I'm sorry, "Lower for No. 2 during 1973," I think the word is "than it was for No. 5 mine --"

A Yes.

1-HG-7

K. Wardell - Sabey Ex.

Q -- "when that was closed on January last".

A Yes.

Q I just want to be clear, sir, that when you say "judged by this criteria", you are comparing a projection on No. 5 with the actual experience on No. 2.

A No, the projection is in relation to 2 and 5 mines. It wasn't a projection simply in relation to No. 5.

Q Well, sir, you say that the projection was relative to the No. 5 mine, at least I understood that's what you were saying.

A No.

Q So the projection was both mines?

A Was both mines.

Q Then your comment is not so curious to me as I thought it was. Sir, dealing with the future, and specifically with the multi seam working, you say "Ideally the first principal is to mine the top seam and then move down."

A Yes.

Q But you did quite fairly qualify that and I presume, sir, when you're starting at the top to mine, presumably, all other things being equal, it would be cheaper and more efficient to mine the first seam and move down. But, sir, do you agree with that?

A Can I rest on the more efficient for the moment rather than the cheaper because cheaper involves many, many other considerations.

1-HG-8

K. Wardell - Sabey Ex.

Q All right, it would be more efficient?

A It would be more efficient.

Q But you've also said that the principal is not always followed in that you have to mine the seams that you can market at a price that you can get to cover those costs?

A Yes, that's a truism.

Q And indeed in your brief you have recognized that it's logical to begin with what was believed or is believed to be the same most efficient amount?

A Yes.

Q And in this specific instance of the Smoky River Coal, you have observed that the greater order of confidence in terms of mineability and cost resides in the No. 4 seam?

A That's correct.

Q Now, sir, but nevertheless you express concern with mining the No. 4 seam before the No. 11 seam?

A No, if I may put it this way, I don't express concern with mining the No. 4 seam before the No. 11 seam in the sense of saying it shouldn't have been done. What I'm saying at the moment is that there is now a proposal, if no more work currently were to be done in No. 4 seam, I wouldn't have any of the kind of reservations that I have expressed about driving the tunnels in and developing No. 11 seam. But the proposal is not to leave, as I understand, the No. 2 mine in its present condition.

K. Wardell - Sabey Ex.

Q It is to be depillared?

A It is to be depillared. Now this is what concerns me.

Q Right. Now, you say that that concern arises because of this fissuring or fracturing problem that may arise?

A I don't want to mince words at all here, Mr. Sabey. If extensive depillaring is carried out, there is no may about it.

Q Well, sir, let's just canvas that for a moment. In your brief you say at page 113: "It is known that fissuring and collapse of the strata overlying extensive coal mining workings can extend upwards the distance of 10 to 12 times the thickness of the coal extracted."

A That's correct.

Q Now, sir, there may be a kicker in this, but I'm always afraid when things appear to be simple that there is. But, let's canvas it anyway. So if the fissuring or fracturing --

A The collapse.

Q -- can extend upwards of 10 to 12 times the area mined --

A The thickness of the seam.

Q The thickness of the coal extracted?

A Right.

Q Not of the seam but of the coal extracted is what you're saying?

A Yes.

Q All right, that's ten feet?

A That's correct.

Q So the effect is going to extend upwards to 120 feet?

A The collapse zone, the zone of collapse --

Q I see.

A -- extends that distance.

Q So what you are now saying is there is an extent, an area of extent that exceeds that beyond the 10 or 12 times?

A Yes, the strata collapses in that zone because you create a void into which the rocks can break down and collapse.

Q Yes.

A But beyond and above that the strata deflect and subside.

Q Now, sir, that result is almost entirely dependent on the strata that lies between the two seams?

A Would that it were.

Q So this is going to happen regardless of what the strata is?

A This is going to happen, and I made this qualification at the beginning, if the area of extraction in No. 4 seam is extensive enough it will happen regardless of the strata.

Q I see, and what do you mean by extensive enough?

A Again perhaps it is best, sir, if I try and show this on the plan. The approximate position, I'm sorry, Mr. Sabey, I didn't --

Q All right, please go ahead.

A The approximate position, and I have had to take this from rather small scale of plan so I don't pretend that the positions are absolutely exact. The approximate position of the entries proposed to be driven in No. 11 seam are shown by the two dotted red lines on this plan, and which run directly over

A (Continued) the northern part of the No. 4 seam workings in No. 2 mine.

If the coal, or the greater part of the coal underlying these entries which extends a distance of approximately 1200 feet is depillared there can be no doubt in my mind that not only will the immediate strata collapse, but even the relatively thick sandstone bed which exists between No. 4 seam and No. 11 seam will break, and there will be extensive subsidence right up to the surface.

Q Thank you, sir. It's very clear. Sir, finally do you agree with the questions and answers that were put to several of the witnesses that economics and techniques are improving and that we are today mining coal that we couldn't mine 10 or 20 years ago?

A No.

Q Would you please amplify that, sir?

A Being in the coal mining business for over 30 years there have been, of course, in my early days of coal mining, were in the days of mining with the pick and the shovel.

There have been improvements in the equipment, there have been improvements in techniques of the utilization of the equipment, there have been improvements in productivity, but there have been no improvements in cost in real terms, if I may put it like that. It costs as much labour cost in relation to the value of a ton of coal, now it bears about the same relationship as it did way back in the late 1930's when I started mining, and far from making areas mineable which were not mineable in 1930 intensive mechanization has meant

2-HGans-3
K. Wardell - Sabey Ex.

A (Continued) that areas that were and could be mined by hand mining methods are not mineable by mechanization, and therefore had to be rejected. For instance if you look at the reserves that were quoted for Great Britain in the late 1930's and you compare them with the reserves today, which are based on the economic, the relative economic assessments the reserves in Great Britain today mineable by highly intensive mechanized methods are about a third of what they were in 1938.

So I don't feel able to accept the proposition that new techniques and new developments will make areas mineable which are not presently mineable.

Q Well, sir, just to be clear on that, you are talking in terms of overall reserves?

A I merely made the comment of its effect on overall reserves.

Q Exactly, but certainly, sir, some techniques have changed to make some specific coals now available for mining that heretofore because of economics or what have you, have not been available without changing your thesis on overall reserves?

A No, I don't think --

Q Well --

A --True in relation to underground mining, and I quite specifically put my position on underground mining.

Q I see, I see, so you don't make your comment relative to coal mining generally but restrict it to underground mining?

A That's correct.

MR. SABEY: I don't think I have any further questions, thank you.

2-HGans-4

K. Wardell - Patching Ex.

A Thank you, Mr. Sabey.

MR. CRUMP: Thank you, Mr. Sabey. Mr. Patching, have you any questions of Mr. Wardell?

MR. PATCHING EXAMINES THE WITNESS:

Q There are just a few for clarification. There is reference in the early exploration to the north and south sectors. I gather that these were on the north side of Smoky River but did any of them include the No. 5 mine area?

A No, sir, the north and south sectors were contained in the total area between Sheep Creek and Smoky River, and I can't remember the exact north-south extent, but the Muskeg fault, the two drainages limited the area being considered to the east and west. The Muskeg fault limited the area to the north, and there was the very steep anticlinal structure which limited it to the south, and this kind of truncated pyramid was divided into three sections, the north section which contained Numbers 1 and 2 mines, the middle section which was very highly disturbed and was regarded as not having extensive deposits of coal existing within it, not even a question of mineability, and the other sector which was substantially No. 1 mine.

Q Thank you. On page 81 of the report, of the brief, speaking of work in No. 2 mine, pillar widths, and you say -

"The normal percentage of extraction before pillar extraction has therefore been about 33 per cent."

Are you meaning in plan or in total percentage of reserve?

A It was in plan, Professor Patching, merely taking an 18 foot

A (Continued) wide entry and an 80 foot square block and working out the percentage on that basis.

Q On the plan basis?

A On the plan basis.

Q The actual percentage of insitu coal would be something less than that, is that correct, because of the coal left below?

A That's correct, that's correct. In other words, it wasn't a volumetric but an areal calculation.

Q Now there has been some question about the proposition of the miners working the mine seven days on a swing shift basis, do you have any knowledge of mines that are working seven days, that is of keeping the mine working seven days on an underground operation?

A The only mine where this was proposed, and had a limited trial, was the so-called push button mine at Bevercotes, and it was abandoned after a few minutes.

Q Thank you.

A It proved unworkable I think very largely for the same kind of reasons that it proved unworkable here, high rates of absenteeism particularly.

Q Do you know why this pattern has, a five day week in underground workings has obtained while open pit seem to manage seven days quite calmly?

A I can't offer a rational explanation for that.

Q There seems to be no difficulty in working pits seven days?

A No, perhaps there is a much stronger traditional sense in underground mining, this is an end and a purpose to which

K. Wardell - Patching Ex.

A (Continued) miners have worked for many many years and once achieved it's not going to be an object which they are going to easily give up, but perhaps the same kind of feeling and tradition doesn't apply to the same extent in contract strip operations.

Q Now, in proposals made of depillaring early, would this not be considered as a short term expedient that you have to, if you are to carry on a continuous operation, do your development at the same rate as you extract pillars? So in making the recommendations going to depillaring would this not be considered a short term expedient?

A If you had not carried out all the development you could reasonably and economically carry out for that mine then, of course, it would be a short term expedient, but if you had gone so far with development that there was for a variety of reasons logically no reason to continue with that development then I think the decision to depillar couldn't properly be described merely as a short term.

Q I see, and on page 117 where you list reserves available in the future, you are showing the percentage of recovery by area as 75 per cent.

A Yes.

Q Don't you think this is rather high?

A It's a judgment, Professor Patching, certainly but I drew some lines out on my plan of No. 2 mine in particular as to how I thought this might be depillared, and this was leaving certain sections of coal between the pillaring sections, and

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K. Wardell - Patching Ex.
- Crump Ex.

A (Continued) I calculated this out on the basis of an overall recovery of 75 per cent by area. I agree it may be a little ambitious but for, totally restructuring the mining to the top 10 feet of the seam it seemed to me that wasn't an unreasonable figure, but for, the proposition that being also to ramp the miners down, take a much greater thickness than that, then I think I would probably have taken a lower percentage extraction by area.

Q Thanks, and I think that is all I want to ask.

MR. CRUMP: Mr. Graham, have you any questions?

MR. GRAHAM: No, I have no questions.

MR. CRUMP EXAMINES THE WITNESS:

Q Just one or two, Mr. Wardell, arising from what Commissioner Patching asked you of working in underground mines seven days a week. Do I take it from your answer that this is largely a matter of agreement or tradition rather than physical or mechanical?

A Certainly I believe, sir, that tradition plays a very substantial part in it, but without any question the weekends at any mine, particularly in underground mines, are normally used for planned maintenance of equipment and for overhauls of plant and so on. So if you go to a seven day week operation you quite automatically create some difficulties with plant and equipment maintenance.

Q Even if you simply shut down one shift for that maintenance rather than two days or six shifts?

A Well, the problem is relaxed, of course, the more shifts you

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K. Wardell - Crump Ex.

A (Continued) allocate to that problem, but one shift may not be enough.

Q Of course, I know you appreciate this question, I can't quite follow why a mine cannot be worked seven days a week, but the service which hauls the coal away works seven days a week twenty-four hours a day and 365 days in the year?

A That is correct.

Q So I don't quite follow the reasoning other than tradition?

A Well, I think we have certainly covered the two major elements, and the one is the tradition and the situation that miners have sought for, even in Australia now we are down to the 35 hour week in underground mines. To get over this you have to have a much larger labour force.

Q But you would also have a much larger production?

A But you would also have a much larger production.

Q The day before yesterday you spoke about the difficulty of exploratory drilling in the eastern Rockies. Having in mind that Kaiser is largely a strip operation except for the hydraulic and the Fording is entirely a strip operation, have you been to Fording?

A Yes, sir.

Q And you have been to Kaiser I know.

A Not for -- not since the very early days of their open pit operations, and I have not seen their hydraulic mine.

Q The earlier days would be a better comparison still. Would you find the exploratory drilling in the Grande Cache area any more difficult than Kaiser are reporting?

K. Wardell - Crump Ex.
- Stevenson Ex.

A Not more difficult in the physical sense. I think there was, the drilling would be deeper for particular holes in the Smoky River than it was in the Fernie area.

Q So that would increase the cost?

A That would increase the cost.

MR. CRUMP: Thank you, Mr. Wardell. Mr. Stevenson, have you any questions?

MR. STEVENSON RE-EXAMINES THE WITNESS:

Q Just a couple, sir. Yesterday, Mr. Wardell, Mr. Sabey asked you about your criticism of Dr. Landes' suggestion that 50 per cent recovery was a fair sort of projection. In Dr. Landes' terms had there been a 50 per cent recovery in any of the underground mining in the Grande Cache area?

A At the moment, no.

Q And that is because they are open mining part of the seam?

A Yes.

K. Wardell - Stevenson Ex.

Q And you told my friend you had been here, you had spent something like four weeks preparing your report, is that the total report you are talking about, Mr. Wardell, not just the part dealing with No. 5?

A No, the total report.

Q I don't suppose you kept time records of what part was taken by No. 5 or, perhaps it wasn't done that way?

A No, I wouldn't like to try and split it up into any specific proportion.

Q Why did you go back and analyze the original planning and decisions, Mr. Wardell, as part of your studies?

A I think it is always necessary in looking at a mining situation to know something about the historical background because things that happened at a particular point in time are always influenced by what has gone before and it seems to me there was unlikely to be any way in which I could come to understand what had happened during the operational period unless I had some fairly clear understanding as to how and why some of the principal decisions which, after all, during operations were irrevocable, had been arrived at.

Q Did you start out with any intention of being critical as distinct from making a criticism?

A Oh, no, the intention was simply to review the facts and the information. It was in no sense being critical about this, but what had happened, what was the information available.

Q And when you examined the present condition did you feel some concern or anxiety as to how it had developed?

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K. Wardell - Stevenson Ex.

A Concern I think would be a proper word and I think also a great deal of sympathy for a situation which evidently grew worse as time went on and where there were difficult problems that had to be dealt with from an engineering point of view and difficult decisions which had to be made.

Q Those are all the questions I have.

A Thank you.

MR. CRUMP: I think that is all for this Hearing, Mr. Wardell, and we appreciate you appearing. You may step down.

A Thank you very much.

MR. CRUMP: In view of the time, gentlemen, I think it might be advantageous for a continuous hearing of the next witness, we will recess for twenty minutes.

(The Hearing stood adjourned at 10:40
and reconvened at 11:10)

MR. STEVENSON: Mr. Chairman, before I call the next witness there is one other item of information to be read into the record to be supplied by Government departments and which was received yesterday.

In connection with questions put to Mr. Bredo of the Department of Education, B-r-e-d-o, page 759, the witness was asked if there were capital expenditures made out of revenue provided by the Province to the School District and the answer is:

"There was in the amounts as follows, in 1970,
\$13,592.61, in 1972, \$44,769.60."

2-LP-3

D.C.H. Stanley and

H.J. Wiggett - Stevenson Ex.

MR. STEVENSON: (continued) The witness was further asked by Commissioner Patching for information with respect to the training of miners and the answer given in respect of his questions, which are at page 770 and 771, is not complete, apparently because it couldn't all be given, but the information the Department had was that to July 31st, 1972 the Department of Advanced Education had a record of 139 miners completing the training in which the Province was involved and during the period of August to November 1972 a further 28 trained for a total of 167. According to the data provided by the Department of Advanced Education, of the 139 miners trained to the end of July 1972, 79 were retained by the company and it is estimated that of the 28 trained from August to November, 1972, 16 were retained by the company. So, that is the answers to the information sought.

MR. CRUMP: Thank you, Mr. Stevenson.

MR. STEVENSON: Now, I would like to call two witnesses and put them forward as a panel, Mr. Stanley and Mr. Wiggett.

DAVID CHRISTOPHER HALL STANLEY, sworn, and HOWARD JOHN WIGGETT, sworn,
and examined by Mr. Stevenson:

Q Mr. Stanley -- excuse me, if I may explain. Both witnesses will speak to or are available to be cross-examined in respect of a submission prepared under the supervision of Mr. Stanley, and in order to avoid the problem of Mr. Stanley and Mr. Wiggett having to inform each other in the court room, I am presenting both witnesses so that they may answer questions you and Mr.

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D. C. H. Stanley and

H. J. Wiggett - Stevenson Ex.

Q (continued) Sabey may have and to give some explanation of the exhibit.

Now, Mr. Stanley, would you outline to the Commission your professional and business background which enables you to give opinions with respect to the economic viability of the coal division operations of McIntyre Porcupine Mines Limited?

A MR. STANLEY: I am a graduate of the University of Toronto in Economics in 1949 with a Master of Commerce Degree in 1954. I joined Wood Gundy and Company in 1949 on graduating from university and have remained continuously in their employ ever since in the capacity as a financial analyst and in connection with corporation finance generally. I became a Director of the firm in 1966 and a Vice-President and member of the Executive Committee in 1969. I am a past President of the Toronto Society of Financial Analysts and a past Vice-President of the Financial Analysts' Federation of the United States and Canada. In 1962 I was asked by the Royal Commission on Banking and Finance to prepare their staff study on the financing of the oil and gas exploration and production industry in Canada. In 1969 I appeared as an expert witness before the Alberta Public Utilities Board in the case of Canadian Utilities Limited. In 1970 I appeared as an expert witness again before the Alberta Public Utilities Board in the case of Canadian Western Natural Gas Company Limited.

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D. C. H. Stanley

H. Wiggett - Stevenson Ex.

Q And your day to day operations with your present employment -- and you're still Vice-president?

A That is correct.

Q -- are in connection with the analysis of corporate enterprises with a view to commenting on their, are giving opinions on their economic stability, their cost projections, their revenue projections, and the like?

A That's correct.

Q Mr. Wiggett, what is your professional background, please?

A I am a graduate of Sir George Williams University, a Bachelor of Science in 1962, a Master of Science applied in Geology from university in 1966, a diploma of Business Administration University of Toronto in 1972. I'm a professional Engineer status of the Province of Ontario. My professional background includes an accumulative approximately ten years of experience in the mining industry both with consulting firms and with mining companies.

Q And your present employment is with Wood Gundy Limited in what position?

A My present position is Mining Financial Analyst, which covers the fields of reviewing mining companies, their financial statements, their production reserves, and any figures or information associated with such projections or interpretation of such figures.

Q Now, Mr. Wiggett, in connection with the particular task

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D. C. H. Stanley

H. Wiggett - Stevenson Ex.

Q (Continued) that was entrusted to Mr. Stanley by the Commission, I take it that you undertook the investigation in order to obtain the fact information which would enable you to make projections for the benefit of the Commission, is that correct?

A That is correct.

Q And did you have access to company records?

A Yes.

Q And did you visit the mine site?

A Yes.

Q And you had access to the testimony of the experts that have been given here and their reports?

A Yes.

Q Mr. Stanley, you have had, I take it, access to information provided by Mr. Wiggett?

A Yes, that is correct.

Q And you have been able to examine any of the law material that you wished to examine, is that correct?

A That is correct.

Q And what terms of reference were given to you by the Commission, Mr. Stanley? What were your instructions?

A The terms of reference were to advise the Commission regarding the viability of the Grande Cache project.

Q Which would be the Coal Division of McIntyre Porcupine Mines Limited?

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D. C. H. Stanley

H. Wiggett

- Stevenson Ex.

A That is correct.

Q Not the company as a whole?

A No. Our terms of reference, basically, had nothing to do with the company as a whole, but related only to the Grande Cache project.

Q And under your supervision, Mr. Stanley, was a series of schedules prepared, how was this investigation, or pardon me, how was your decision recorded for the purposes of the Commission?

A For the purposes of the Commission, we have prepared a set of six schedules, which are numbered Tables 1 to 6, reporting on the historical performance of the Grande Cache project in the last three years or so, and on its expected future performance up to the year 1977, and I propose to comment on that and also to comment in a general way as to what we foresee for the period beyond 1977.

Q Is that the list of exhibits that you referred to?

A Yes, it is.

MR. STEVENSON:

May that be marked as an exhibit?

It will be number 44.

LIST OF EXHIBITS REFERRED TO BY
MR. STANLEY MARKED EXHIBIT 44.

Q MR. STEVENSON: Mr. Stanley, that document has now become Exhibit 44. Would you explain briefly to the Commission the contents of this document and your projections?

A We have presented six tables in evidence. Perhaps, I might

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D. C. H. Stanley

H. Wiggett

- Stevenson Ex.

A (Continued) review them briefly and comment on the conclusions which may be drawn from them. May I direct your attention to Table 6.

Q That's the last one?

A Table 6 is an actual and forecasted statement of profit and loss and cash flow. Tables 1 to 5, which preceded present the data from which Table 6 has been constructed. Table 6 estimates sales in the period 1974 to 1977, ranging between 1.8 and 2 million long clean tons per annum, and the detail of this is given in Table 2. These figures have been derived from evidence previously submitted to the Commission by various parties. They seem to amount almost to a consensus and they seem reasonable to us.

Looking further into the future, we expect that production at this rate can be continued for a considerable period, particularly, if, as we expect, rising coal prices in the intermediate to longer term make more and more coal bodies in the Grande Cache field economic.

We are using the present coal price of \$21.95 per ton throughout the period of 1977. On the other hand, we have not escalated costs of labour and materials. This is tantamount to following the practice of other witnesses before the Commission of assuming that product price increases will offset increases in costs. Such an assumption seems to us to be reasonable in the short term

A (Continued) and conservative over the long term.

Mine operating costs, which are detailed in Table 5, have been arrived at by applying our judgment to evidence presented to the Commission by others. My associate, Mr. Wiggett, is prepared to analyse these costs in detail in response to any questions which may be asked him.

Passing on to page 2 of Table 6, it will be noted that interest represents a major cost component. Interest costs have been projected on the basis that cash flow during the period to 1976 will just offset capital expenditures, thus providing for no debt repayment until 1977. It is assumed that present term bank debt maturing December 31st, 1976 will be refunded in full on the same terms as the present obligation, and it is assumed that the bank prime rate will level off at some eight per cent at the end of 1974.

Depreciation and amortization has been derived from evidence presented by others to the Commission. It will be noted that depreciation rates are low in relation to the expected life of presently proven coal bodies and that with respect to a significant part of the capital invested in the project, no depreciation or amortization is currently or is expected to be provided at all.

In light of all of the above, it

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D. C. H. Stanley

H. Wiggett

- Stevenson Ex.

A (Continued) will be noted that we foresee cash flow essentially reaching break even in 1974 and becoming positive to the extent of some two million dollars per annum in 1975 and 1976, in some four and a half million dollars in 1977. This positive cash flow, in conjunction with the sale of certain assets, is adequate to provide for the outside capital needs of the project during the period and to provide for some four million dollars of debt repayment in 1977. Net of non cash expenses, we foresee a loss position in early years moving to break even by 1977.

Our conclusion, based on all of the above, is that the project should be able to operate successfully at a cash break even point or better for the immediately foreseeable future, employing its present or a slightly increased work force. In the longer term, evidence appears to indicate that the viability of the project should improve partially by reason of the proving up of additional coal bodies, but primarily because we expect the world market price of coal to outrun the rise in its cost of production.

Any financial forecast for a developmental project is of necessity a chancey proposition. The fate of previous forecasts for the Grande Cache project, referred to in submissions to the Commission, illustrates this only too well.

While we are satisfied that our

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D. C. H. Stanley

H. Wiggett

- Stevenson Ex.

- Sabey Ex.

A (Continued) projection is entirely a reasonable one under the circumstances, we are aware that our coal output figures may be challenged as too low and our mining cost figures challenged as too high. While we may be accused of being too pessimistic in projecting the bank prime rate as settling as high as eight per cent, at the same time it must be recognized that these figures are variables and our projections might prove too favourable just as easy as too unfavourable. For this reason, we have considered the impact on our conclusions of slight variations plus and minus in these three basic assumptions. Either way the overall picture does not change materially. It is still one of a viable operation on a short term though a little better than break even, of the necessity for a major debt refinancing at the end of 1976 and of the likelihood of improving viability over the longer term as coal price rises outrun production costs.

MR. STEVENSON:

I have no questions on that

statement of Mr. Stanley and Mr. Wiggett.

MR. SABEY EXAMINES THE WITNESSES:

Q Either one of you gentlemen mind answering this question, I don't know which. Did you take into account in your projection that underground mining in No. 2 has passed the development stage and is now in the pillaring stage which has lower costs per unit of production?

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D. C. H. Stanley

H. Wiggett - Sabey Ex.

MR. WIGGETT:

Yes,

MR. SABEY:

Excuse me one moment.

MR. CRUMP:

Surely.

MR. SABEY:

Thank you, Mr. Chairman.

MR. CRUMP:

Mr. Patching, have you any

questions?

MR. PATCHING:

No, I haven't.

MR. CRUMP:

Mr. Graham?

MR. GRAHAM:

No, I haven't.

MR. CRUMP:

The Commission is very happy to

have the statements from this, along with the annual reports, we have quite sufficient material. Under the circumstances, Mr. Stevenson, have you any further questions?

MR. STEVENSON:

No, thank you.

MR. CRUMP:

In that event, gentlemen, you may stand down. Thank you for coming.

(Witnesses retired.)

MR. CRUMP:

Gentlemen, that completes the

evidence of witnesses called by the Commission, and I would like to thank all of those appearing before the Commission for their cooperation and their help, which I am sure will be very beneficial in our deliberations.

I would like to thank the court reporters and some of it, I know, was rather difficult to transcribe because of the mining terms that were used, but on

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General Discussion

MR. CRUMP: (Continued) the whole I think the transcript seems to be satisfactory.

I am sure I am speaking on behalf of my confreres on the Board when I say we appreciate the help that we have attained from the witnesses.

This, gentlemen, terminates the Hearing of this Commission.

(The Hearing was adjourned.)

